

Thermal Components Boost Performance of HVAC Systems



Johnson Space Center

*Mainstream Engineering Corporation
Rockledge, Florida*

NASA Technology

- ◆ The International Space Station (ISS) faces extreme temperatures, reaching 250 °F while facing the Sun
- ◆ The Thermal Control System is a crucial part of temperature regulation, utilizing liquid cooling systems and radiators to collect heat from the ISS and release it into space



Partnership

- ◆ Since the late 1980s, Mainstream has worked with NASA field centers to develop advanced thermal control technology for spacecraft
- ◆ Under Small Business Innovation Research (SBIR) contracts, Mainstream developed a nontoxic heat transport fluid, as well as high-performance, low-cost thermal control equipment

Benefits

- ◆ PuraClean is a liquid spray for air filters; it insulates the fibers and provides a 1,200 percent increase in efficiency without affecting air-flow
- ◆ PuraClean is under review to become a certified allergy- and asthma-reducing HVAC product
- ◆ QwikShot is an acid flush that bolsters cooling-system stability without leaving a residue